

In re Tunney, et al.
U.S. Patent Application No. 09/901,514

Amendments to the Claims

In the Claims

Please amend the claims as follows:

1. (Currently amended) A method of cleaning ~~containers~~ pressurized rail tank cars containing chemicals comprising:

Gammell
Bombard providing a ~~container~~ pressurized rail tank car having a quantity of a chemical contained therein;

providing an input gas;

heating the input gas;

injecting the input gas into the ~~container~~ rail tank car via a first valve to form a chemical/input gas mixture within the ~~container~~ rail tank car;

removing the chemical/input gas mixture from the ~~container~~ rail tank car; and

providing a reaction tank comprising a neutralizing material;

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Van Pool injecting the chemical/input gas mixture into the tank comprising the neutralizing material;

reacting the chemical of the chemical/input gas mixture with the neutralizing material to dispose of the chemical; and

injecting further quantities of heated input gas into the rail tank car to form further chemical/input gas mixtures and injecting the further chemical/input gas mixtures into the reaction tank to react the chemical in the further chemical/input mixtures with the neutralizing material to dispose of the chemical, until the fume level of the chemical within the rail tank car has reached a predetermined level.

~~disposing of the chemical/input gas mixture.~~

2. (Currently amended) The method of claim 1 further comprising the step of:

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removing the chemical/input gas mixture from the ~~container~~ rail tank car via a vacuum pump.

3. (Currently amended) The method of claim 2 further comprising the step of:

removing the chemical from the ~~container~~ rail tank car via the vacuum pump prior to injecting the heated input gas into the ~~container~~ rail tank car.

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Currently amended) The method of claim 1 further comprising the step of:

heating the input gas to a temperature of between about 100°F and about 300°F prior to injecting the input gas into the ~~pressurized container~~ rail tank car.

8. (Currently amended) The method of claim 1 further comprising the steps of:

providing an input pipe attached to the ~~pressurized container~~ rail tank car via a first valve;

providing an output pipe attached to the ~~pressurized container~~ rail tank car via a second valve on a first end of the output pipe and a disposal means on a second end of the output pipe; and

closing the second valve and opening the first valve when injecting the input gas into the ~~container~~ rail tank car.

9. (Currently amended) The method of claim 8 further comprising the step of:

closing the first valve and opening the second valve when removing the chemical or chemical/input gas mixture ~~via the vacuum pump~~.

10. (Original) The method of claim 1 further comprising the step of:

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providing a control means for controlling the injection of the input gas and removal of the chemical/input gas mixture.

11. (Currently amended) The method of claim 1 further comprising the steps of:

providing a control means for automatically controlling the injection of the input gas and removal of the chemical/input gas mixture; and

controlling the injection of the heated input gas to the container via the ~~controller~~ control means.

12. (Currently amended) The method of claim 1 further comprising the steps of:

providing a plurality of valves on the ~~container~~ rail tank car; and

opening up a first valve to inject the ~~container~~ rail tank car with the heated input gas to form a the chemical/input gas mixture.

13. (Currently amended) The method of claim 12 further comprising the steps of:

closing the first valve when the ~~container~~ rail tank car is sufficiently pressurized; and

opening a second valve to remove the chemical/input gas mixture.

14. (Original) The method of claim 13 further comprising the step of:

synchronizing the opening and closing of the first and second valves so that the first valve is closed when the second valve is open and the first valve is open when the second valve is closed.

15. (Currently amended) The method of claim 1 further comprising the step of:

synchronizing the injection of the heated input gas and the removal of the chemical/input gas mixture.

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16. (Original) The method of claim 14 wherein the synchronization step is performed via a control means.

17. (Original) The method of claim 15 wherein the synchronization step is performed via a control means.

18. (Cancelled)

6 | 19. (Currently amended) The method of claim ~~18~~ 1 wherein the neutralizing material comprises a caustic solution.

20. (Currently amended) The method of claim ~~18~~ 1 wherein the neutralizing material is selected from the group consisting of sodium hydroxide, potassium hydroxide, sodium carbonate, calcium hydroxide, sodium sulfite, sodium thiosulfite, ferrous chloride and solid bed absorbents.

21. (Currently amended) The method of claim ~~18~~ 1 further comprising the steps of:
pushing the chemical/input gas mixture through the reaction tank; and
reacting the chemical with the neutralizing material to form a salt.
